

## Completed Return on Investment Project Case Study

United States Department of Energy  
Office of Environmental Management  
Fact Sheet

### **Purchase and Install Laboratory Glassware Washers Los Alamos National Laboratory**

#### Original Problem

All of the glassware used in DX-2 used to be washed by hand, wasting thousands of gallons of water and hundreds of hours of personnel time every year. The washing process was the largest generator of waste water in the group since each item required about 2 gallons of water. The water is contaminated with trace high explosives, so the waste water has to be stored on site, analyzed for contamination, and then treated at a special facility.

#### The Project Solution

Two automatic glassware washers were purchased and installed in the chemistry labs. These glassware washers only require about 0.3 gallons of water per item washed.

#### Value of Improvement

This project offers several significant benefits. Altogether the chemists save hundreds of hours a year since loading the glassware washer is a much faster process than washing glassware by hand. The glassware washers use about 4500 gallons of water per month less than the old system. The reduction in waste analysis and treatment fees save DX-2 approximately \$54,000 annually.

Lifecycle Waste Reduction	
Lifecycle Waste Reduction	4500 gal. /mo.
Commencement Date	1999
Project Useful Life (Years)	10



#### DOE Monetary Benefits

Total Project Cost	\$21,040
Lifecycle Savings	\$54,000 / year
Return on Investment	85%

#### Benefits At-A-Glance

- The automatic glassware washers prevent the generation of about 4500 gallons of waste water every month.
- The chemists can now spend hundreds of hours a year on more productive activities than washing glassware.
- DX-2 saves about \$54,000 annually on reduced waste analysis and treatment.

## **Purchase and Install Laboratory Glassware Washers**

### **Los Alamos National Laboratory**

#### **Summary Data**

Priority Area:	Waste Minimization Projects
Project Type:	Source Reduction
Total Project Cost:	\$21,040
Lifecycle Savings:	~\$54,000 per year
Implementing Group:	DX-2
Benefiting Group:	DX-2
Useful Life Years:	10
Return on Investment:	85%
Lifecycle Waste Reduction:	4500 gallons of rinse waste water / month
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